PROSPECTUS

FOR

FISHERY DEVELOPMENT PROJECT

October, 1971

The Government of the Republic of Korea

Seoul, Korea

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Summary of the Project

1. Title : Fishery development project

2. Project sponsor : The Central Federation of Fisheries Co-operatives, Seoul, Korea

3. Estimated fund for the project

   Foreign exchange cost : US $ 11,529,000

   Domestic capitals : 460,100 thousand won

4. Project description :

   This project is designed to modernize fisheries facilities and to develop fisheries products to promote the benefit of fishermen during the Third Five Year Economic Development Plan period by importing new vessels, replacing obsolete vessels, motorizing equipment and enlarging the southern port of Pusan.

Total Fund Required

Unit : US $ 1,000
₩ 1,000

Project	Scale	Quantity	Domestic Capitals	Foreign Capitals
Skipjack poleline vessel	400 G/T	4 vessels	40,800	3,200
Replacing obsolete vessel (large trawler)	120 G/T	8 "		1,168
Redeveloping southern part of Pusan port		2,850 m	364,000	4,949
Motorization	27,660 HP	120 engines	55,300	2,212
Total			460,100	11,529

5. Benifit of the Project

a. Skipjack poleline vessel : The effect of this project is expected to produce 5,708 M/T, export 2,088 thousand dollars and employ 124 persons in 1974.

b. Large trawler : It will produce 4,160 M/T, export 672 thousand dollars and employ 108 persons in 1974.

c. Fishing port construction (Pusan) : Fishermens' income will be raised by extending landing-docks (1,300m), break - waters (1,550m) for anchoring of large vessels, 170,000 M/T of landing capacity in a year, and capacity of 3,300 vessels moorage.

d. Motorization :

i. Enabling distant fishing and saving sailing hous will bring more catches of about 15,000 M/T.

ii. Fishery catches of higher quality will bring raised income of fishermen.

iii. Substituting powerful engines for inefficient ones will allow expenditure saving.

Contents

Chapter I : Outline of Korean Fisheries

Korea has achieved rapid growth in fishery by setting forth "The First and Second Five Year Economic Development Plan" in 1960's, which resulted in an annual average 12 percent increase in production for the 10 years from 1961 to 1970. This growth trend which was 2.9 percent higher than the annual average GNP could be divided into parts as follows ;

1. Fish production and trade.

Between 1960 and 1970 fish production has almost tripled from less than 360,000 tons to over 935,000 tons, placing the Republic of Korea among the world's major fish-producting countries. This achievement was accomplished through the expansion of the fishing fleet, supported by training facilities, from about 34,000 vessels in 1960 to over 68,000 vessels in 1970, the total tonnage of which, however, increased more than threefold during the same period, reflecting the introduction of larger vessels, especially in the offshore and deep-sea sectors. While the bulk of supplies still derives from the inshore fisheries, the contribution from the latter has reduced from over 90 percent in 1962 to less than 75 percent in 1970. The most conspicuous feature during this period has been the expansion of the deep-sea fisheries, production from which was negligible in 1962 but amounted to some 10 percent of total supplies in 1970.

Unit : M/T

Category	1966	1967	1968	1969	1970
Total	702,295	750,349	852,291	862,784	935,462
Coastal	481,709	490,928	553,370	514,215	525,793
Aquaculture	91,085	97,164	113,053	86,437	119,228
Off-shore	102,649	121,773	135,794	179,350	200,820
Deep-sea	26,852	40,484	50,074	82,782	89,621

Virtually all supplies from the inshore and close offshore fisheries are sold on the domestic market, whereas virtually all deep-sea fish (mainly tuna) is exported. In 1970, tuna exports were valued at over US$ 37 million, representing 42 percent of total fish exports. Laver exports, valued at US$ 11,6 million, represented 13 percent. The fish export trade, therefore, is heavily dependent on two main products, frozen tuna and laver. The main outlets are Japan (US$ 38 million), which imports laver, fresh fish and shellfish, and the United States (US$ 34.5 million) which takes most of the tuna.

Export by Country

Unit : $ 1,000

Year / By Country	1966	1967	1968	1969	1970
Total	42,036	57,499	57,323	73,916	90,052
Japan	25,245	35,396	33,607	36,015	38,352
Hongkong	754	567	299	497	1,020
U.S.A	9,205	13,112	12,445	20,293	24,592
Singapore	735	778	500	592	946
China (Taiwan)	735	825	1,029	2,270	421
Thailand	593	717	338	553	502
Vietnam	200	416	2,402	2,532	538
Canada	305	227	110	212	78
Ryukyu	202	150	134	175	305
Italy	215	321	385	240	344
Holland	70	113	191	810	1,334
Nigeria	1,325	1,449	1,152	1,781	1,767
Kenya	104	208	285	355	547
Sierra Leone		518		965	1,816
Others	2,348	2,902	4,446	6,626	7,490

Export by Item

Unit : $ 1,000

Item	1966	1967	1968	1969	1970
Total	42,036	57,499	57,322	73,916	90,052
Fresh & Alive	6,967	6,721	7,232	6,764	11,353
	3,872	6,084	4,653	4,556	5,994
Squids	6,290	4,630	1,970	4,156	10,335
Dried	390	533	646	343	599
Salted	1,368	1,730	1,217	1,224	1,566
Canned	1,655	519	2,221	2,184	375
Agar-agar	2,753	5,000	1,851	1,780	1,227
Sea weeds	1,002	929	586	998	1,525
Laver	6,838	14,371	17,054	21,221	11,592
Tuna	7,971	11,969	15,559	24,072	37,663
Others	87	102	86	149	510
Fishing Net	2,727	46,001	4,165	5,969	7,313
Rope	116	110	81	-	-

2. Fishing operation by ocean.

a. Coastal and off-shore fishing

These operations provide virtually the sole source of domestic fish supplies. A wide variety of vessels and gears is employed, comprising otter and pair trawls, boat and beach seines, stow-nets, gill nets, traps and lines. Trawling and stow-nets predominate on the wide shallow continental shelf on the west coast, while pelagic seining and gill-netting predominate on the east coast.

So far there has been very little modernization of these traditional operations and, as indicated in the 1970 fishing fleet census out of some 67,000 vessels engaged in these fisheries, over 54,000 are non-powered and for the most part are unsuitable for mechanization. The vessels are generally small, the average tonnage of the mechanized vessels being only 18 G.T. and of non-powered vessels less than 2 tons. The main innovation has been the introduction of the larger trawlers of about 80 G.T.

Catches from these operations have continued to increase slowly and in 1970 accounted for some 726,000 tons out of a total production of 935,000 tons.

b. Deep-sea fishing

The most significant and dramatic developments have been in this sector in which production has increased from 2,500 tons in 1963 to nearly 90,000 tons in 1970 and the fleet from 10 vessels to 278 vessels in the same period. Tuna longlining in the Pacific, Indian and Atlantic oceans is by far the most important of these deep-sea.

c. Aquaculture

The cultivation of seaweed, molluscs and crustaceans is practised extensively along the shores of the Korean peninsula and its neighbouring islands. In 1970 total production from these sources amounted to over 119,000 tons, representing 11 percent of the volume of total Korean fish production. At present laver cultivation is by far the most important commercial fishery although the cultivation of oysters and clams is especially favoured in certain areas by the pure, unpolluted sea water and is likely to increase. Pending the result of further experiments, which are now in progress, it is not possible to forecast the potentialities for the cultivation of sea fish and shrimp in impounded waters.

Fishing Vessel Force

Year	No.of vessel	Tonnage	Average tonnage of a vessel	No.of vessel	Tonnage	Average tonnage of a vessel	No.of vessel	Tonnage	Average tonnage of a vessel
1966	53,294	245,962	4.62	8,884	160,487	18.06	44,410	85,474	1.92
1967	57,255	262,079	4.58	10,989	179,117	16.29	46,266	82,961	1.75
1968	62,002	292,962	4.73	11,444	206,321	18.03	50,558	86,641	1.71
1969	66,115	342,279	5.18	12,852	251,064	19.54	53,263	91,215	1.71
1970	68,355	358,365	5.24	14,085	268,182	22.38	54,270	90,184	1.66

3. Processing

The total processing in 1970 amounted to 106,000 M/T showing respectively a 51.3 percent increase over that of 1969 and 86.5 percent over that of 57,000 M/T of 1960.

Processing by Year and Commodity

Unit : M/T

Commodity	1966	1967	1968	1969	1970
Total	82,413	84,758	77,267	69,814	105,610
Dried	14,187	8,967	19,176	9,651	13,855
Salted & dried	1,806	2,274	2,906	2,512	756
Cooked	9,944	10,217	4,475	7,766	2,951
Salted & Preserved	5,080	4,546	3,774	1,576	1,562
Pickeled	7,852	15,669	11,660	4,036	4,581
Canned	6,336	4,956	3,688	5,067	5,352
Frozen	25,353	22,136	18,487	24,291	62,312
Sea-weeds	9,730	13,154	11,490	13,636	11,758
Fish Meal & Oil	1,152	922	628	482	527
Others	973	1,917	983	797	1,956

4. Fishing Population

In relation to the nation's total population the portion of fishing population in 1970 marked 3.9%, numbered 1,229,000 persons, and represented an annual decrease to 5.1% since 1967. Such a declination was largely attributed to the change of industrial structure, following expanded opportunity of employment in manufacturing sector, which resulted in decreasing the latent unemployed in fishing villages.

Unit : 1,000 men

Classification	1966	1967	1968	1969	1970
Fishing Population	1,494	1,520	1,406	1,373	1,229
No.of Fishermen	1,441	1,477	1,346	1,325	1,165
Fish Processing People	53	43	60	48	64
Employed People	576	591	541	510	368

5. Distribution of Marine Products.

The consignment sales of landing area in 1970 increased by 8.1% over the year before and compared with 201,000 tons consignment sales in 1960, it accounted for 2.5 times increase. Meanwhile, transportation of marine products were largely dependent upon trucks and rail. Opening new express ways, transportation by truck has rapidly grown to cover 80% of them. In addition, the variation rate of annual price index of marine-food increased 17.6% which is higher than the average nationwide whole sale price index, 12.7 % .

Year	Gross production (A)	Gross consignment sales (B)	Rate (%) (B/A)	Distribution portion	
				Landing area	Consuming area
1966	701,167	310,890	47	27 %	73 %
1967	750,349	356,299	48	29 %	71 %
1968	852,291	298,237	47	26 %	74 %
1969	862,783	490,180	57	28 %	72 %
1970	935,462	529,742	57	27 %	73 %

6. Fishery Funds Supplying

By the end of 1970, balance of loan supplied from financial loan funds was 14,091 million won, increased by 29.8% over 10,859 million won, balance of loan by the end of 1969. Breaking down by the type of the funds, there were revolving funds of, 4,893 million won, ratio of the two kinds of funds were 65.3% to 34.7%. The increase of fishery funds as mentioned above were caused by the increase of funds for equipments and revolving funds : buildingOvessels and promoting aquaculture belonged to the former and coastal, off-sea, and deep-sea fishing to the latter.

7. Policy of Fisheries in 1971

A. Fundamental guideline

1) Increase in fishermen's income and in export of marine products.

2) Formation of foundation to maintain continuous productivity.

B. Target.

Production : 1 million M/T

Export : US $ 110 million

C. Main Policies

1) Formation of resources and protection of propagation.

2) Expansion and improvement of fundamental facilities of fisheries.

3) Development of coastal and inland water aquiculture.

4) Improvement of structure of coastal fisheries.

5) Expansion of deep-sea fisheries.

6) Increase of marine products export and improvement of marine products marketing.

7) Development of fishery technology.

Chapter II : Project Sponsor

1. Name of Institution : The Central Federation of Fisheries Co-operatives.

2. Address : 88 Kyung-woon-dong, Chong-ro-ku, Seoul, Korea
   Tel : 75-5701-9

3. History :

   A. 1939, Established as the Cho-sun Fisheries Co-operatives.

   B. 1962, Reorganized as the Central Federation of Fisheries Co-operatives.

4. Mission :

   A. Accelerating to organize an institution in which fishermen and fish processing workers can co-operate.

   B. Improving economic and social status of fishermen and increasing productivity.

   C. Guiding and supervising of the working members.

5. Function :

   A. Guidance business :

   Guidance business, aimed at increasing fishermen's income, promoting the management ability, enhancing the cultural standard of living in fishing

village, is playing vital roles in fisheries cooperatives movement.

1) Namely, the creation of cooperative mood among fishermen.

2) Production guidance and the introduction of modern technique.

3) The encouragement of subsidiary business.

4) Carrying out wide-range research and analysis of the fishing economy, fishing household economy.

5) Launching an enlightenment movement through printed materials and audio-visual aids.

6) The operation of fisheries wireless communication facilities for safe fishing.

B. Procurement business

Procuring and supplying necessary tools and materials for the fishermens need.

C. Marketing business

1) Consignment sales of marine-products, joing collection, and sales through systymatic channel.

2) Inventory controlling and selling for price stability of marine products.

3) Stabilizing optimum price of fishes all the year through, and protecting both of fishermen and consumers.

D. Utilization facilities

1) Supporting fishermen's benifit by operating facilities of ice, freezing and refrigeration.

2) Maintain the fishery freshness and controling damand and supply.

E. Credit service

Encouraging production by supplying fishery funds at due time.

F. Mutual insurance

Protecting lives and properties of fishermen from unexpected damages by running mutual insurance.

G. Foreign loan business

O.F.F.C. borrowed 40 million dollars for the coastal and off-sea fishery development mutually agreed to fund as Korea Japan co-operative fishing funds and relend it to end user as request.

6. C.F.F.C. Organization

President — Auditor - - - Auditor Office

Vice President

Secretary Office
Public Information

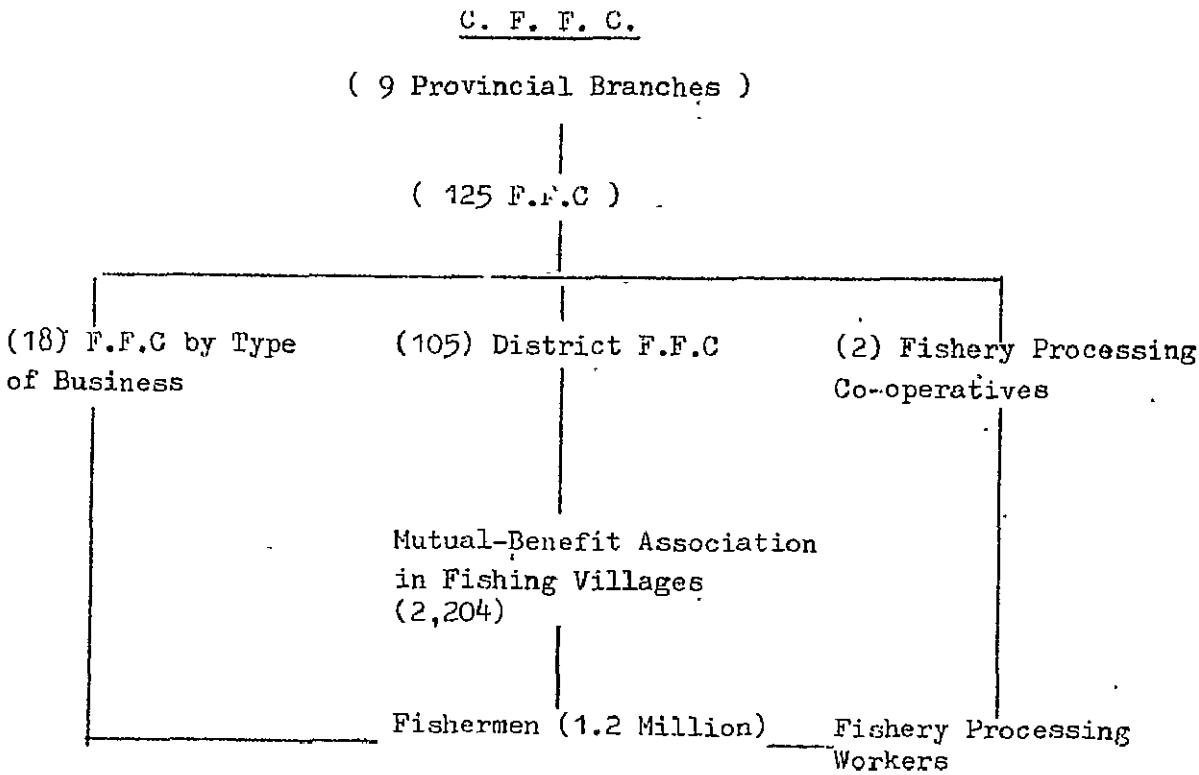
Directors

- - - Planning & Research Dept.
- - - General Affairs Dept.
- - - Extension Service Dept.
- - - Marketing Dept.
- - - - - Taegu Co-op Market Busines, Sales, Army Supply
- - - - - Inchon Co-op Market Business, Sales, Ice Mfg.
- - - Business Dept.
- - - - - Wulsan Oil Supply Office
- - - Trading Dept.
- - - - - Wando Laver Mfg. Office
- - - Army Supply Dept.
- - - Financing Dept.
- - - Lendings
- - - Administration
- - - Savings Dept.
- - - Fund Operation Dept.
- - - Foreign Loan Dept.
- - - Communication Dept.
- - - Mutual Insurance Dept.
- - - Fisheries Cooperation Executive Office

7. Member Organizations of C.F.F.C.

C.F.F.C has member organizations as follows ;

105 district F.F.C, and 18 different F.F.C organized by type of fishing business and 2 co-operatives of fishery processing business. Moreover, there are 2,204 mutual-benefit associations in fishing villages under the district F.F.C control.



Chapter III : Contents of Project

1. General

1) Outline of the projects

With energetic performance of the 1st and 2nd 5-year economic development plan during the decade of 1960, fisheries sectors have achieved economic growth of 12.1% annually. Furthermore, this hopeful trend shall be continued during the next 3rd 5 year economic development plan which will start from 1972. The Government intends to keep it's pace for raising fishermen's income by providing loan funds for various projects. And the effort shall be focused at the projects as follows; developing skipjack pole line fishery which has high valued merit in marketing and exporting, and replacing old vessels with new ones, and improving engines, and redeveloping port and piers of southern part of Pusan for 500 ton's crafts mooring, etc.

2) Scale of loan funds

Unit : Foreign : $ 1,000
Domestic : Won 1,000

Project	Scale	Quantity	Domestic Capitals	Foreign Capitals
Skipjack pole line vessel	400 ton	4 vessels	40,800	3,200
Replacing obsolete vessel (large trawler)	120 ton	8 "		1,168
Redeveloping southern part of Pusan port		2,850 m	4,000	4,949
Motorization	27,650 HP	120 engines	55,300	2,212
Total			460,100	11,529

3) Performance plan

Unit : $ 1,000

Year / Category	Unit	1973 Quantity	1973 Foreign Capitals
Skipjack pole line vessel	Vessels	4	3,200
Replacing obsolete vessel (large trawler)	"	8	1,168
Redeveloping southern part of Pusan port	m	2,850	4,949
Motorization	Set	120	2,212
Total	Vessels	12	
	m	2,850	11,529
	Set	120	

2. Contents of Projects

1) Skipjack poleline

a. Background

(1) Present situation

Korea has achieved rapid growth in deep-sea fishery during the 1st and 2nd 5-year economic development plan in 1960's since tuna trial fishing operation in Indian Ocean in 1957.

In 1967, the initial year of the 2nd 5 year economic development plan, the catches and export in deep sea sector reached 37,996 M/T and 12,582,000 dollars respectively with 180 vessels G/T 41,076. And furthermore the status of deep sea vessels has increased to 278 vessels G/T 75,793 and it's catches and export also has proportionly increased to 89,620 M/T and 37,663,000 dollars annually.

That indicates increase of 2.3 times in catches, of 3 times in export, and of 1.5 times in vessel enlargement during three years.

Deep-sea fishery during 1966 to 1970 is one highly developed field in fishing industry through strong assistance by government and active investment at the private enterprise level as shown following table ;

Year / Category	65	66	67	68	69	70
Vessels	65	158	180	210	224	278
Tonnage (G/T 1,000)	10	31.7	41.1	50.7	70.5	81.8
Production (M/T 1,000)	8.5	26.9	38.0	50.1	82.8	89.6
Export ($ Million)	2.4	9.2	12.6	15.6	24.1	37.7

The status of deep-sea fishing operation by ocean is as following ;

Ocean / Category	Pacific Ocean	Atlantic Ocean	Indian Ocean	Total
Vessels	118	124	36	278
Tonnage (G/T)	23,467	42,983	9,343	75,793
Production (M/T)	41,443	39,370	8,808	89,621
Export ($ 1,000)	12,513	21,447	3,703	37,663

The status of vessel force by over-sea base in respective ocean is as follows ;

Ocean	Base	Operating vessels	Tonnage
Pacific Ocean	Samoa	87	15,470
	Fiji	18	2,880
	Bering sea	13	5,117
	Sub-total	118	23,467
Atlantic Ocean	Free-town	11	2,563
	Tema	23	6,570
	St. Martin	6	1,071
	Abidjan	15	3,803
	Montevides	2	432
	Tenerife	2	940
	Laspalmas	60	26,504
	Paramaribo	5	500
	Sub-total	124	42,983
Indian	Tamatave	22	6,380
	Penang	5	451
	Port-louis	9	2,512
	Sub-total	36	9,343
	Grand-total	278	75,793

Comparing general trend of production and export with the rest fishery field, deep-sea fishery marked 5.8% increase in production, 21.8% in export in 1967 and 9.6% in production, 41.8% in export in 1970 as follows.

Year	1967			1970		
Category	Total catch	Deep-sea fishery	Percentage	Total catch	Deep-sea fishery	Percentage
Production (M/T)	653,185	37,996	5.8	935,461	89,621	9.6
Export ($1,000)	57,499	12,582	21.8	90,052	37,663	41.8

(2) Development plan and policy

The Government intends to develop deep sea fishing industry continuously since it's role in supply of marine protein and earning foreign exchange can be greatly expanded by increasing the fishing fleet, development of fishing ground. The general development plan and policy are as follows ;

a) Development plan ;

(1) Investment plan (during the 3rd 5 year economic development plan)

Item	Quantity	Investment amount		
		Foreign ($1,000)	Domestic (Millionwon)	Total (Million won)
Import of vessels	271 vessels (G/T 131,950)	155,090		44,724
Development of fishing ground			130	130
Installation of over-sea base	5 base		75	75
Total		155,090	205	44,929

(2) Plan of production, export and employment (during 72-76)

Production : M/T 193,700

Export : $ 73,463,000

Employment : 7,466 persons

b) Policy :

(1) Increase the tonnage of vessels with the loan funds, such as governmental funds, KFX credit and private Loan, etc.

(2) Multilateral directions for development of fisheries shall be tried and basic environment shall be formed for production, processing management and exportation.

(3) Specialization and development of fishing gear and fishing methods are aimed at importing advanced technique and specialized crews, and safty operation in fishing shall be promoted also.

(4) Raise the ratio of foreign income by maximizing the utilization of domestic tools or materials and providing necessary support to increase exportation.

b. Contents

(1) Skipjack, a kind of tuna has good projects in marketing and exporting according to the increase of requirement of tunas all over the world. Their fishing grounds are extended to Okinawa and Eastern Japannese Islands, Kuroshio current area. Therefore, the import of 4 vessels for skipjack poleline with loan funds will contribute to production and exportation to achieve a balanced growth of Korean deep-sea fishery.

Unit : Foreign :$1,000
Domestic:Won 1,000

Category	Tonnage	Vessel	Investment Amounts	
			Foreign	Domestic
Skipjack poleline fishery	400	4	3,200	40,800

Note : Domestic amount is for fishing operation funds

(2) Skipjack poleline fishery in Korea was confirmed technicaly about the possibility of development by AID's feasibility-survey team in 1968, and Coastal Fisheries Training Center in Pusan is setting up training course of this fishery to obtain many trained crews under co-operation with UNDP.

c. Performance plan of the project

Central Federation of Fisheries Cooperatives, project-sponsor will import the vessels in 1973.

Unit : Foreign : $ 1,000
Domestic : ₩ 1,000

Category	Per a vessel		Total (4 vessels)		
	Foreign Capitals	Domestic Capitals	Vessel	Foreign Capitals	Domestic Capitals
Skipjack poleline vessel	800	10,200	4	3,200	40,800

d. Efficiency of the project

By acquiring 4 vessels for the skipjack pole line during the working year, we'll produce 5,708 ton, export 2,088,000 dollars, and employ 124 persons and then all the results above will serve for the nation's economic development.

(1) Production and sales plan by year.

Unit : Production : M/T
Sale : $ 1,000

Project	Per a vessel		4 vessels		Others
	Production	Sales	Production	Sales	
Skipjack poleline vessel	1,427	522	5,708	2,088	Production and sales from 1974

(2) Employment plan by year

Unit : Person

Project	Per a vessel	1974	Others
Skipjack poleline vessel	31	124	

(3) Balance sheet expected

Unit : $ 1,000

1974

By years / Category	Per a vessel	No. of vessels	Amounts
Income	522	4	2,088
Expenditure	323		1,292
Balance	199		796

2). Replacement of Obsoleted Vessels

a. Background of Project

Total catch in coastal fishing reached ₩ 200,800 indicating 21.5% out of total production, 935,462 tons in 1970. Trawler fishing in coastal fishery is main production gear which took about 57%. The trends of trawler fishing is showing gradual increase by catching 114,373 ton in 1970 but it was 58,692 ton in 1964 that means increase of about 2 times. The main factors enable to achieve the plan are extention of fishing ground and modernization of equipment.

1) Trend of production in trawler fishing

Year	66	67	68	69	70
Vessels	346	320	411	444	457
Production	38,715	76,761	83,762	93,593	114,373

2) Status of trawler vessels by tonnage

Tonnage	Above 50	" 60	" 70	" 80	" 90	" 100	Total
Number of vessels	68	27	77	104	144	37	457

3) Status of age

Age	Under 5 years	Above 5 years	" 10 years	" 15 years	" 20 years	Total
Number of vessel	64	88	181	71	53	257

b. Development plan & policy

In view of a bulk number of vessels operating in coastal fisheries are obsolete and catches per tonnage is decreasing year by year, replacement of obsolete vessels with modernized vessels and equipments is enevitable for distant fishing development such as south China sea. The policys are as follows to meet this development.

1) Development plan

(a) Investment plan (During the 3rd Five Year Economic Development Plan)

Project	Quantity	Investment amount		
		Domestic Capitals	Foreign Capitals	Total
Introductions of vessels	G/T 48,600 (1,155 vessels)	(Mil. Won) 9,505	($1,000) 28,170	(Mil. Won) 18,255
Modernization of engine	90,000 HP	2,888		2,888
Modernization of equipment	1,750 ea.	531	570	708
Total		12,924	28,740	21,851

(b) Production plan (1972 - 76)

Year	72	73	74	75	76
Production (Ton)	778,600	806,400	836,900	867,400	898,000

c. Policy :

1) Increase of vessels force with government budget and loan at comercial rate.

2) Replacement of obsolete over 15 years old vessels.

3) Extention of fishing ground through improvement of equipment.

4) Improvement of fishing gear and introduction of technique.

5) Specialization of fishing technique through training of crews, promotion of efficiency and safety operations.

d. Loan project

The total number of trawler is 457 and 27% of them (127 vessels) are already obsolete ones over 15 years old. Replacing them, thus, is needed in a hurry but the shortage of civilian and governmental funds make it hard. Therefore, it is necessary to import 8 vessels of trawler with foreign funds.

Unit : $ 1,000

Project	Tonnage	Number of vessels	Loan amounts
Trawler	120	8	1,168

e. Performance plan

They shall be imported at the year begin of 1973.

Unit : $ 1,000

Year	1973		
Vessels	No.of vessels	Loan amounts($)	Remarks
Trawler	8	1,168	

f. Efficiency of project

1) Plan of production, sales and employment in 1974,

Per set			1974		
Production (Ton)	Sale ($1,000)	Employment (Person)	Production	Sale	Employment
1,040	168	27	4,160	672	108

* a set of vessel consists of two vessels

2) Balance plan

Year	Per set	1974 Number of set	1974 Amount
Income	168	4	672
Expenditure	140		560
balance	28		112

* Expenditure per set covered depreciation amount $ 15,526.

3) Fishing Port Construction (Pusan)

a. Background

1) Present situation of southern port of Pusan

Pusan has a great weight as a fishing port, as it has vast consumption sphere, to which transportation facilities are well developed.

Pusan is designated as commercial port by the Ministry of Construction. Of the Pusan port only the Southern Port is partitioned as fishing port area and the presently used First Wharf and Fishery Center are planned to be transfered to the Southern Port.

The number of fishing vessels registered to Pusan port, as of 1969, totaled to 2,933 units, 4.4% of total fishing vessels. And the catch landing to Pusan port amounted to 12.9% of that of the whole country. However, the Southern Port lacks landing facilities for large vessels over 500 tons and existing landing facilities can accommodate about 90,000 M/T annually, but this is inadequate to handle the present consignment sale. And its breakwater facilities can accommodate only 2,100 units of fishing vessels. Therefore extension of port facilities is very urgent.

a) Status of facilities

	Existing		Program		Total	
Category	Quantity	Capacity	Quantity	Capacity	Quantity	Capacity
		vessels		vessels	vessels	vessels
Breakwater	850 m	2,100	1,550 m	3,300	2,400	5,400
Landing Dock	920 m	9,400 M/T	1,300 m	260,000 M/T	2,220 M/T	354,000 M/T

b) Status and prospect of vessel forces and atch amount

Category	Existing	1976 (Expected)	1981 (Expected)
Fishing vessel			
Total	2,933 vessels	4,740 vessels	6,030 vessels
Less than 5 G/T	1,818	2,790	3,530
5 - 30 G/T	590	1,000	1,310
30 - 100 G/T	419	730	910
Over 100 G/T	106	220	300
Catch	133,000 M/T	218,000 M/T	291,000 M/T

2) Implement Policy

a) Southern port will be extended and will be used as a fishing operation base.

b) Required cost for the facilities will be allotted with foreign loan. The balance of the above said fund will be re-invested for the fishermen.

b. Contents of the Project

With the demand to construct facilities in which large fishing vessels can moor and to extend landing docks and breakwaters in Pusan port with in short ime, the required cost will be provided with foreign loan for the projects.

Category	Target	Amount	
		Foreign Capitals ($ 1,000)	Domestic Capitals (₩ 1,000)
Breakwater	1,550 m	4,178	
Landing Dock	1,300 m	771	364,000
Total		4,949	364,000

c. Project Program

The project will be carried out by the Central Federation of Fisheries Cooperatives. The foreign loan will be repaid with the fund yielded by disposal of reclaimed land.

Unit : Foreign : $ 1,000
Domestic : ₩ 1,000

Category	1st year		
	Target	Capitals	
		Foreign	Domestic
Total	2,850 m	4,949	364,000
Breakwater	1,550 m	4,178	
Landing Dock	1,300 m	771	364,000

d. Effects of the project

Raising fishermen's income will be able achieve by not only extending the landing docks (1,300 m) and breakwaters (1,550 m) for anchoring of large vessels and 170,000 ton's landing capacity but also by making possible 3,300 vessels moorage.

e. Balance Sheet of the project

Unit : $ 1,000

Total Revenue	Total Pay Out	Balance
12,183	11,849	334

4) Motorization

a) Background of the project

1) Present force of fishing fleet

a) Total number of fishing fleet in our country at present is 66,115 vessels and they are composed of non-powered crafts, 80% (53,263) and powered ones, 12,851 vessels. But among the powered crafts, that of equipted with inefficient engine like hot-bulb engine aquired 61% (7,851 vessels) of all. Power-improving project, therefore, has been performed by the supp-orting of financial funds and the results could be seen as the the table below.

Classification	Period	No.of engine	Horsepower
Total results	60 - 71	3,062	71,337 HP
	60 - 61	39	907 "
The 1 st 5 year economic development plan	62 - 66	220	3,680 "
The 2nd 5 year economic plan	67 - 71	2,803	66,750 "

b) Presumed demand quantity in substituting powerful engines for the inefficient ones was about 350,000 HP (18,000 engines) which required governmental support.

(Presumed Quantity for Improving Engines)

	Fishing fleet to be shifted		Presumed quantity needed govn't support		
Category	No.of vessels	Total tonnage	No. of vessels	Total tonnage	Horsepower
Whole demand	24,000	72,700	18,000	57,600	350,000
Motorization	18,000	29,500	14,300	23,300	185,000
Entine shifts	4,600	43,200	3,700	34,300	165,000

2) Development plan (72-76) : 90,000 HP

b) Contents of project

Total number of engines that the government should provide is 18,000 (350,000 HP) and 120 engines (27,650 HP) of them would be improted and equiped with oreign capital borrowed.

Unit : Foreign : $ 1,000
Domestic : ₩ 1,000

Category	Quantity		Capitals	
	No.of engines	Horsepower	Foreign	Domestic
Diesel Engines (above 150 HP)	120	27,650	2,121	55,300

c) Peformance plan

Central Federation of Fishery Co-operatives (C.F.F.C),as the executing institution of this project will import and equip the engines in 1973. Domestic funds shall be raised from civil entrepreneur and provided to general expenditure (in the process of importation) and installation.

Unit : Foreign : $ 1,000
Domestic: ₩ 1,000

1973

Year / Category	Quantity		Capital	
	No.of engines	HP	Foreign	Domestic
Diesel engines (Above 150 HP)	120	27,650	2,212	55,300

d. Effect of the project

1) Enlargeing fishing area and shortening sailing-hours will bring more catches of about 15,000 M/T.

2) Fishery catches of higher quality will bring the fishermen's income hiked.

3) Substituting powerful engines for the inefficient ones will bring saving expenditure for operating materials.

4) Strengthening by motornization and shifting engines will bring.

a) Safe fishing with speedy move.

b) Prevention of damages.

c) Power for lighting electric fixtures in the vessel.

Major Fishing Grounds by Type of Fishing and by Species